



#### Product Summary

V <sub>(BR)DSS</sub>	R <sub>DS(on)TYP</sub>	I <sub>D</sub>
20V	7.6mΩ@4.5V	10A
	7.8mΩ@4.0V	
	7.9mΩ@3.8V	
	8.2mΩ@3.1V	
	8.8mΩ@2.5V	

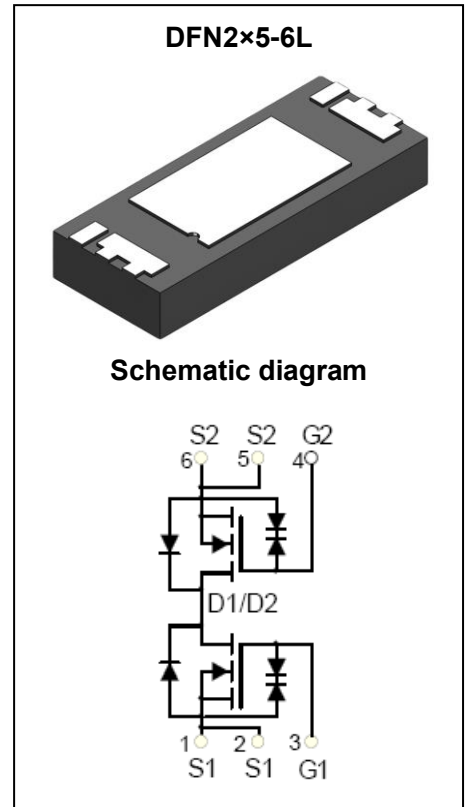
#### Feature

- Trench Technology Power MOSFET
- Low R<sub>DS(ON)</sub>
- Low Gate Charge
- ESD Protected

#### Application

- Battery Protection Switch
- Mobile Device Battery Charging and Discharging

#### MARKING:



#### ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub> = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain - Source Voltage	V <sub>DS</sub>	20	V
Gate - Source Voltage	V <sub>GS</sub>	±12	V
Continuous Drain Current <sup>1</sup>	I <sub>D</sub>	10	A
	T <sub>A</sub> = 25°C		
Pulsed Drain Current <sup>2</sup>	I <sub>DM</sub>	40	A
Power Dissipation <sup>4</sup>	P <sub>D</sub>	1.26	W
	T <sub>A</sub> = 25°C		
Thermal Resistance from Junction to Ambient <sup>5</sup>	R <sub>θJA</sub>	99	°C/W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>STG</sub>	-55~ +150	°C

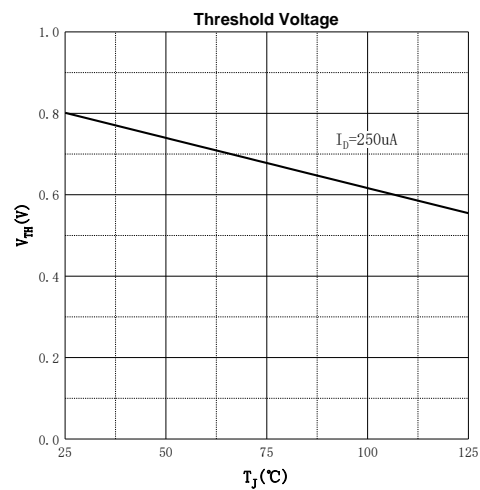
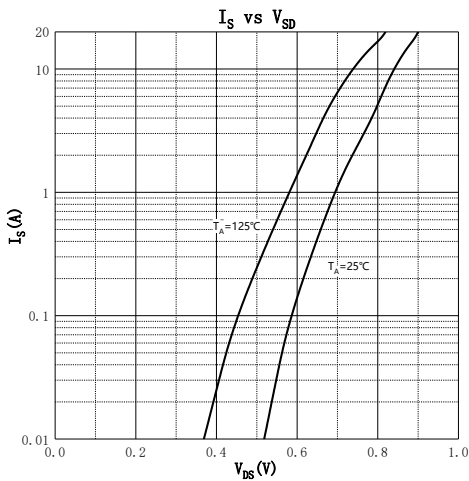
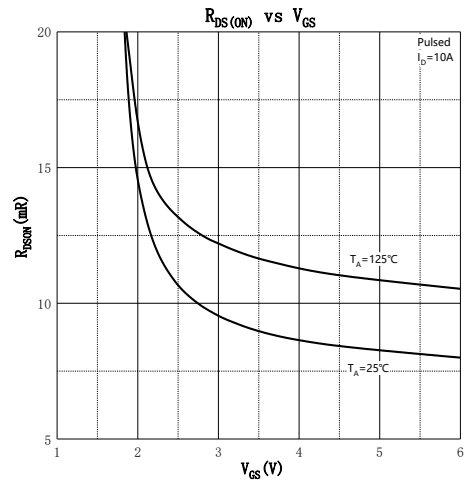
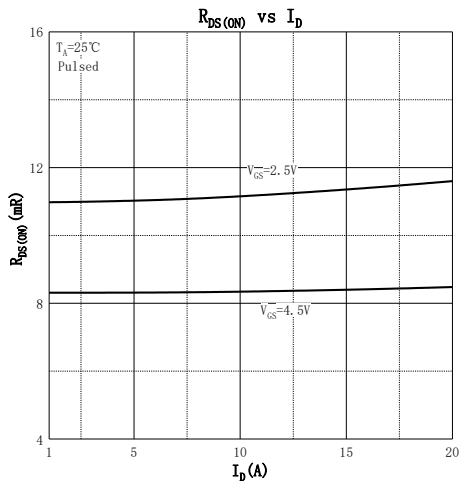
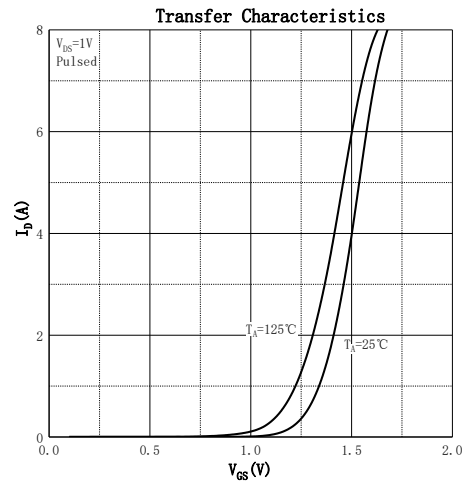
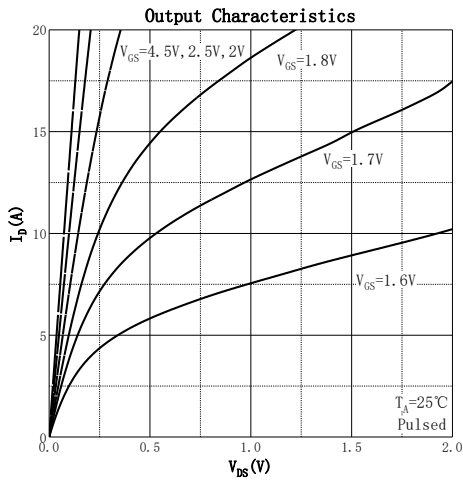
**MOSFET ELECTRICAL CHARACTERISTICS ( $T_J = 25^\circ\text{C}$  unless otherwise noted)**

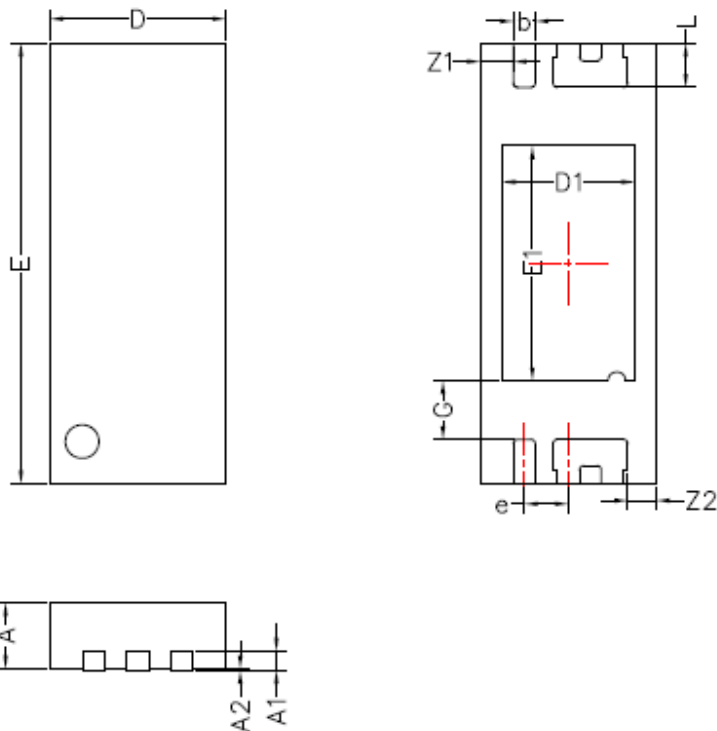
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
<b>Off Characteristics</b>						
Drain - Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	20			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 16V, V_{GS} = 0V$			1	$\mu A$
Gate - Body Leakage Current	$I_{GSS}$	$V_{GS} = \pm 8V, V_{DS} = 0V$			$\pm 3$	$\mu A$
<b>On Characteristics<sup>3</sup></b>						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	0.4	0.7	1.0	V
Drain-source On-resistance	$R_{DS(on)}$	$V_{GS} = 4.5V, I_D = 3A$	5.6	7.6	10.5	m $\Omega$
		$V_{GS} = 4.0V, I_D = 3A$	5.8	7.8	10.6	
		$V_{GS} = 3.8V, I_D = 3A$	6.0	7.9	10.7	
		$V_{GS} = 3.1V, I_D = 3A$	6.2	8.2	11.5	
		$V_{GS} = 2.5V, I_D = 3A$	7.0	8.8	14	
<b>Dynamic Characteristics</b>						
Input Capacitance	$C_{iss}$	$V_{DS} = 10V, V_{GS} = 0V, f = 1MHz$		1176		pF
Output Capacitance	$C_{oss}$			192		
Reverse Transfer Capacitance	$C_{rss}$			51		
<b>Switching Characteristics</b>						
Total Gate Charge	$Q_g$	$V_{DS} = 10V, V_{GS} = 4.5V, I_D = 5A$		20		nC
Gate-source Charge	$Q_{gs}$			4		
Gate-drain Charge	$Q_{gd}$			7		
Turn-on Delay Time	$t_{d(on)}$	$V_{DD} = 10V, V_{GS} = 4.5V, R_L = 2\Omega$ $R_G = 3\Omega$		3		ns
Turn-on Rise Time	$t_r$			6.5		
Turn-off Delay Time	$t_{d(off)}$			50		
Turn-off Fall Time	$t_f$			95		
<b>Source - Drain Diode Characteristics</b>						
Diode Forward Voltage <sup>3</sup>	$V_{SD}$	$V_{GS} = 0V, I_S = 3A$			1.2	V

Notes :

- 1.The maximum current rating is limited by package.
- 2.Pulse Test : Pulse Width  $\leq 10\mu s$ , duty cycle  $\leq 1\%$ .
- 3.Pulse Test : Pulse Width  $\leq 300\mu s$ , duty cycle  $\leq 2\%$ .
- 4.The power dissipation  $P_D$  is limited by  $T_{J(MAX)} = 150^\circ\text{C}$ .
- 5.Device mounted on  $1in^2$  FR-4 board with 2oz. Copper, in a still air environment with  $T_A = 25^\circ\text{C}$ .

**Typical Characteristics**



**DFN2×5-6L Package Information**


Unit: mm

Package Dimensions			
Symbols	Min	Nom	Max
D	1.95	2.00	2.05
E	4.95	5.00	5.05
D1	1.45	1.50	1.55
E1	2.60	2.67	2.75
L	0.40	0.50	0.60
b	0.20	0.25	0.30
Z1	0.325	0.375	0.425
Z2	0.275	0.325	0.375
G	0.615	0.665	0.715
e	0.50BSC		
A	0.70	0.75	0.80
A1	0.203REF		
A2	0.00	-	0.05

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)